

Name: _____

Date: _____

Algebra 1B Pd: _____

Exponent Practice #4

NO CALCULATORS PERMITTED!

Part One: Multiple Choice: Write the CAPITAL LETTER of the best answer on the line provided.

1. _____ Evaluate b^{-3} for $b = 3$.

- A. 27 B. $\frac{1}{9}$ C. $\frac{1}{27}$ D. -27
- _____

2. _____ Simplify $4^{-2} \cdot 4^0$.

- A. 16 B. 1/16 C. -24 D. 0
- _____

3. _____ Simplify $9^{-1} \cdot 9^7 \cdot 9^{-2}$.

- A. 9^{-6} B. 9^{-14} C. 9^{10} D. 9^4
- _____

4. _____ Simplify $(6d^8)(-8d^9)(6d)$.

- A. $-288d^{18}$ B. $4d^{72}$ C. $4d^{18}$ D. $288d^{72}$
- _____

5. _____ The small number to the upper right of the base is called:

- A. exponent B. index C. power D. all of the above
- _____

Part Two: Simplifying Exponential Expressions (4 points): Simplify each expression as completely as possible (no negative or zero exponents or exponents of one). Do not leave powers with the same base. BOX your final answers.

6. $(abc)^{-1}$	7. $(7x^2y^{-3}z^4)(-2x^5y^8z)$
8. $(x^3y^8)^3$	9. $(3a^{-2}b^{-6}c^{15})^2$

CHALLENGE:

Find the values of x, y and z.

$$\begin{array}{rcl} 4a^x b^4 c^{-3} & = & 2b^9 \\ 10a^{10} b^y c^z & & 5a^{13} c^3 \end{array}$$

x = ____ y = ____ z = ____

